ER-AQ-16: REV. 3/79

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF AIR QUALITY CONTROL
Application for Plan Approval to Construct, Modify or Reactivate an Air Contamination Source and/or Air Cleaning Device and for a Permit to Operate

HBG. REGION
RECEIVED
OCT 17 1990
DER-HBG. REGION
AIR QUALITY CONTROL

Read the instruction carefully before completing this form. Submit duplicate copies.

Section A Identity and Location of Air Contamination Source

1A. Application is being made for:

- [X] Construction of New Source/Operating Permit
- [ ] Reactivation of a Source/Operating Permit
- [ ] Modification of Existing Source/Operating Permit
- [ ] Installation of Air Cleaning Device/Operating Permit
- [ ] Amendment to a Previous Application
  Previous Application No. ___-___-___

OFFICIAL USE ONLY

Application No. 36-327-011A
Plant Code _____ Unit ID _____
Date Received _____
Reviewed by _____

Potential Emissions (TPY)
PM _____ SO_2 _____ VOC _____
NOX _____ CO _____ Other _____

Actual Emissions (TPY)
PM _____ SO_2 _____ VOC _____
NOX _____ CO _____ Other _____

Change in Actual Emissions (+ or —)
PM _____ SO_2 _____ VOC _____
NOX _____ CO _____ Other _____

1B. Type of source
Conveyorized Vapor Degreaser

1C. Plant in which source is located
[X] NEW [ ] EXISTING

1D. If source is new, does it replace another source (describe source replaced) [ ] YES [X] NO

1E. Expected date of completion
December 1990

2A. Owner of source
Hamilton Technology, Inc.

2B. Employer I.D. No. (Federal IRS No.)
52-1380200

3A. Owners designation of source and/or plant if any
Detrex Inline Cleaner

3B. Location of source (Street address or Route No.) | Political Subdivision (Township, etc.) | County
101 N. Queen St., Lancaster, PA | Lancaster

3C. Mailing address (Street or P.O. Box, City, Zip Code)
101 N. Queen St. Lancaster, PA 17604

3D. Telephone No.
717-299-2581

4A. Person to contact regarding this Application (name and title)
Donald B. Hafer

4B. Mailing address (Street of P.O. Box, City, State, Zip Code)
101 N. Queen St. Lancaster, PA 17604

4C. Telephone No.
717-299-2581

5. Official signing application must be an agent of the Company having primary responsibilities for operation of the facility to which this application applies. Although he may not have participated in the design of the facility he should be responsible for approval of the design.

AFFIDAVIT

I PAUL L. REINHART, being duly sworn according to law depose and say that I am the official having primary responsibility for the design and operation of the facilities to which this application applies and that the information included in the foregoing application is true to the best of my knowledge, information and belief.

Sworn to and subscribed before me this 11 day of OCTOBER, 1990.

NOTARIAL SEAL
BETTY S. FITZGERALD, NOTARY PUBLIC
LANCASTER, LANCASTER COUNTY
MY COMMISSION EXPIRES DEC. 7, 1992
Member, Pennsylvania Association of Notaries

Notary Public

Signature

Director of Manufacturing

Title

SECTION B. DEGREASERS

TYPE, CAPACITY & OPERATING SCHEDULE

NIT	A. TYPE DEGREASER I.E. OPEN TOP, CONVEYORIZED	B. MANUFACTURER OF DEGREASER	C. MODEL NO.	D. INTERNAL DIMENSIONS WxLxD (FT)	E. VAPOR-LIQUID INTER FACIAL AREA (SQ. FT.)	F. TYPE OF MATERIALS PROCESSED	G. AREA PER LOAD (SQ. FT)	H. AVERAGE HR/DAY	I. TOTAL HR/YR.	% LOAD /QUARTER 1st	2nd	3rd	4th
1	Conveyorized	Detrex	SMI 12-BSI-2EE	66 x 20	9.2 sq. ft	PCB FR46-10	1.2 sq. ft.	7	1,680	25	25	25	25

CONTROLS

COVER NUAL/ WERED	B. PERMANENT LABEL OF OPERATING REQUIREMENTS	C. FREE BOARD RATIO	D. WATER JACKET INLET TEMP °F	E. PRIMARY CONDENSER COIL INLET TEMP °F	F. CONDENSER FLOW-SWITCH & THERMOSTAT	G. SPRAY PUMP SAFETY SWITCH FOR 4 INCHES VAPOR DROP	H. VAPOR LEVEL THERMO-STAT SET POINT °F	I. DRYING TUNNEL OR EQUI-VALENT	J. ENTRANCE & EXIT SILHOUTTE FOR 4" CLEAR-ANCE/ < 10% WIDTH OPENING	K. CONVEYOR SPEED/ HOIST SPEED (FPM)	L. EXHAUST VENTILATI (CFM)
olted	yes	160%	N/A	40-45F	N/A	yes		N/A	yes	1-5 FPM	N/A

A. LIST TYPES OF SOLVENTS USED AS A PERCENT OF TOTAL USAGE & BOILING POINTS OF EACH SOLVENT.

HCFC 141B Genesolv 2004 84.9

B. ANNUAL AMOUNTS OF EACH SOLVENT USED.

Est. 2,000 gal.

B.C. % USAGE QUARTER

1st	2nd	3rd	4th
25	25	25	25

ATTACH DIMENSIONED DIAGRAM OF DEGREASER & ANY ADDITIONAL INFORMATION NECESSARY FOR THOROUGH EVALUATION. INCLUDE: HEAT INPUT, SUMP TEMPERATURE, STILL, ETC.

DESCRIBE FULLY THE FACILITY TO MONITOR AND RECORD ALL OPERATING CONDITIONS THAT MAY AFFECT THE EMISSIONS OF AIR CONTAMINANTS.

DESCRIBE DISPOSITION OF:

A. SPENT SOLVENT FROM DEGREASER
Send to Safety-Kleen for recycling

B. SLUDGE FROM STILL
Send to Safety-Kleen for recycling

C. SOLVENT FROM ADSORBER
N/A

COSTS A. COST OF ALL CONTROL EQUIPMENT INCLUDING INSTALLATION COSTS

$3,500.00

B. ESTIMATED ANNUAL OPERATING COSTS OF CONTROL EQUIPMENT ONLY

$1,400.00

SECTION C - CONTROL EQUIPMENT

1. REFRIGERATED CHILLERS

A. MANUFACTURER Copeland

B. TYPE
Refrigerated Chillers: Sub-zero operating at -20°F

CHECK ONE
[X] SUB-ZERO CHILLER
[ ] ABOVE ZERO CHILLER

C. MODEL NO.

D. COOLANT UNITS

REFRIGERATION RATING HP _____

BTU PER HOUR PER FOOT OF AIR/VAPOR INTERFACE PERIMETER _____

NO. OF PASSES OF COILS _____

DURATION AND FREQUENCY OF DEFROST CYCLE _____

E. OPERATING TEMPERATURES

REFRIGERANT TEMPERATURE ~~°F.~~ °C -29°C

LOWEST AIR BLANKET TEMPERATURE AT THE CENTER LINE OF THE TANK °F.

3 HP 36,000 BTU/hr to maintain a temperature of 30% of solvent boiling point.

F. ATTACH DIMENSIONED SKETCH OF CHILLER & DESIGN SPECIFICATION
3 HP internally mounted (see sketch).

G. ATTACH ANY MANUFACTURER GUARANTEES

H. Cost - $3,500.00

SECTION D - STACK AND EXHAUST INFORMATION

1. EXHAUSTER STATIC PRESSURE N/A IN W.G.

   BRAKE HORSE POWER _____ MOTOR _____ H.P.

   SPEED _____ R.P.M.

2. STACK HEIGHT ABOVE GRADE (FT.)

   GRADE ELEVATION (FT)

   DISTANCE FROM DISCHARGE TO NEAREST PROPERTY LINE (FT.)

3. STACK DIAMETER (FT) OR OUTLET DUCT AREA (SQ.FT.)

4. WEATHER CAP _____YES _____NO

5. INDICATE ON AN ATTACHED SHEET THE LOCATION OF SAMPLING PORTS WITH RESPECT TO EXHAUST FANS, BREECHING, ETC. GIVE ALL NECESSARY DIMENSIONS.

6. CAN THE CONTROL EQUIPMENT BE BYPASSED? _____YES _____NO
   IF YES, EXPLAIN THE CONDITIONS UNDER WHICH THE EQUIPMENT WILL BE BYPASSED. (GIVE THE SETPOINTS OF AFFECTING PARAMETERS.)

7. OUTLET VOLUME OF EXHAUST GASES:

   _____CFM _____°F. _____ % MOISTURE

SECTION E - MISCELLANEOUS INFORMATION

1. ATTACH AIR POLLUTION EPISODE STRATEGY (IF APPLICABLE).

   N/A

2. BRIEFLY DESCRIBE THE GENERAL NATURE OF THE AREA IN WHICH THE SOURCE IS LOCATED.

   The Degreaser will be located on the fourth floor at 101 N. Queen St. in Lancaster, PA. The area is an assembly line area with clean room conditions. It is air conditioned and humidity controlled environment for production of electronic fuse assemblies

3. IF THE SOURCE IS SUBJECT TO SECTION 127.63 (SPECIAL PERMIT REQUIREMENTS), DEMONSTRATE THE AVAILABILITY OF EMISSION OFFSET (IF APPLICABLE).

   Emmissions are controlled by the enclosed chambes and conveyorized transport system with condensing coils and sub-zero coils provided in the entry and exit chambers.

4. Detrex model 12BSI-2ER-a is electrically heated with 5 tube heaters and cooled by an air cooled 2 HP mechanical refrigeration unit. All necessary safety controls are included.

5. Hamilton Technology owns two instruments which are used for monitoring degreaser solvent emissions. One is a Gastech Model 1230 Halide Detector which is used for on-the-spot solvent vapor measurements. It is used also for optimizing the strip cycles on the carbon adsorber, operated under a permit previously obtained, as well as for checking for solvent leaks on the degreasers. The other instrument used is a Hewlett Packard Model 5890A Gass Chromatograph. This instrument is used primarily for analyzing 3M #3500 Vapor Monitoring badges which are used for worker and environmental exposure checks. All checks to date have been below acceptable exposure levels for Freon. Since this solvent is very expensive, Hamilton Technology strives to minimize its loss through air emissions.

6. A. Spent solvent from the degreaser is redistilled via a separate still.

   B. Sludge or still bottoms from the stills typically contain 5-10% redisual solvent with the remainder being oil and dirt. These still bottoms are disposed of as hazardous wastes through Safety-Kleen Corp in Hebron, Ohio.

ATTCH 1

6482-893-90

DETREX MODEL "BF" FREEBOARD CHILLER

GENERAL DESCRIPTION

The Detrex Model "BF" Freeboard Chiller is designed to reduce solvent emissions from a solvent vapor defluxer. The true solvent vapors are condensed by the conventional water or refrigeration cooled coils. The solvent-air mixture in the freeboard area contains an appreciable quantity of solvent. Utilizing the Freeboard Chiller, the temperature in this area is effectively reduced. This cooling effect results in a significant reduction of the solvent content of the solvent-air mixture in this area. The Freeboard Chiller, in addition, reduces to a minimum convection currents and turbulence that are the causes of solvent emissions from a defluxer.

The Detrex Model "BF" Freeboard Chiller operates at sub-zero (-20° F) temperatures producing a cold blanket across the surface of the vapor zone.

Operated according to manufacturer's recommendations, solvent emissions can be reduced in range of 30 to 40 percent.

Chiller system will be complete with cooling coils mounted above the vapor line in the freeboard area of the entrance and exit tunnels, and is also provided with an automatic defrosting system. Coils will be mounted in the entrance and exit tunnels with a stainless steel trough located directly underneath. The trough will be piped to a dedicated water separator. Water from this water separator will be piped to the back of the defluxer cabinet for customer disposal. Solvent from the water separator will be piped into the defluxer water separator/desiccant dryer. Customer will be responsible for monitoring solvent.

Cooling coils will be refrigerated by a ½ hp air-cooled hermetic sealed compressor. Heat rejection rate for this compressor is approximately 5,200 BTU/hr. The refrigeration system and components will be tested in our manufacturing plant.

Form "BF1"
June 14, 1989